

REMARKS/ARGUMENTS

Claims 1-38 are currently pending in the present patent application.

In an Office Action mailed on November 14, 2005 in the above-referenced patent application, the Examiner note two minor changes that should be made to the figures. A set of formal figures labeled as replacement sheets accompanies this amendments and makes the minor changes requested by the Examiner. More specifically, Figure 2 has been amended to include the label "Background Art and in Figure 6 reference number "94" has been changed to "94a." Also note that the specification has been amended to incorporate application numbers for related applications incorporated in the present application by reference and to correct a minor error in one instance of incorporation by reference in paragraph 54.

The Examiner rejected claims 1-2, 4-7, 9-12, 16, 20, 23, and 30-33 under 35 U.S. C. § 102(b) as being anticipated by U.S. Patent No. 6,308,311 to Carmichael *et al.* ("Carmichael"). The remaining claims were rejected over various combinations of Carmichael and U.S. Patent Appln. No. 2004/0061409 to Rudusky and 2003/0177223 to Erickson and U.S. Patent No. 6,893,873 to Moore.

Amended claim 1 recites a programmable circuit operable to receive multiple versions of firmware from an external source, each version of firmware representing a corresponding operating configuration. The circuit stores the multiple versions of firmware in a memory and downloads a selected one of the versions of firmware from the memory. Figures 3-5 illustrate one embodiment of the present invention covered by claim 1. As seen in Figure 5, the firmware memory 52 stores a plurality of versions of firmware corresponding to the operating configurations 116₁-116_i in the figure. In Figure 4, one of these configurations 116₁-116_i is loaded into the pipeline circuit 80, which may be an FPGA, to configure the circuit to operate the configuration corresponding to the loaded operating configuration. This embodiment illustrates the flexibility of the peer-vector machine 40, which must be flexible to allow data intensive operations to be performed in the pipeline circuit 80 for a variety of different programs being executed by the host processor 42.

Neither Carmichael nor any of the other references, whether taken singly or in any combination, disclose or suggest a programmable circuit as recited in amended claim 1. In

Erickson only a defined default configuration is stored in the SPROM 38 of Figure 3 and loaded into the FPGA 32 via a serial port 32s. A new firmware configuration can be loaded into the FPGA 32 via the host 20, controller 34, and SRAM 36, but only a single new configuration at a time must be loaded from the host, stored in the SRAM and the loaded into the FPGA. The FPGA does not determine which of a plurality of firmware configurations stored in memory to download and use to configure the FPGA. Neither do any of the other references disclose a programmable circuit with such a structure. The combination in amended claim 1 is therefore allowable.

Amended dependent claim 13 recites a programmable-circuit unit including a memory operable to store a plurality of firmware configurations, each firmware configuration respectively representing a corresponding operational configuration. A first programmable circuit is coupled to the memory and downloads a selected one of the firmware configurations from the memory, operate in the operational configuration corresponding to the selected firmware configuration, download a different one of the firmware configurations from the memory, and operate in the operational configuration corresponding to the different firmware configuration. A second programmable circuit coupled to the memory and to the first programmable circuit operates similarly to download a selected one of the firmware configurations from the memory, operate in the operational configuration corresponding to the selected one of the firmware configurations, download a different one of the firmware configurations from the memory, and operate in the operational configuration corresponding to the different firmware configuration.

Once again, none of the cited references discloses a programmable-circuit unit as recited in amended claim 13. In Erickson, for example, there is no disclosure or suggestion of storing multiple firmware configuration for each processor 112, 114 or FPGA 113 in memory and then transferring a selected one of these configurations to configure the device. This is not the purpose of Erickson, unlike the recited programmable circuit where different firmware must be available to configure the pipeline circuits 80 as required to perform different calculations depending on the program being executed by the machine 40. Accordingly, the combination of elements in amended claim 13 is also allowable.

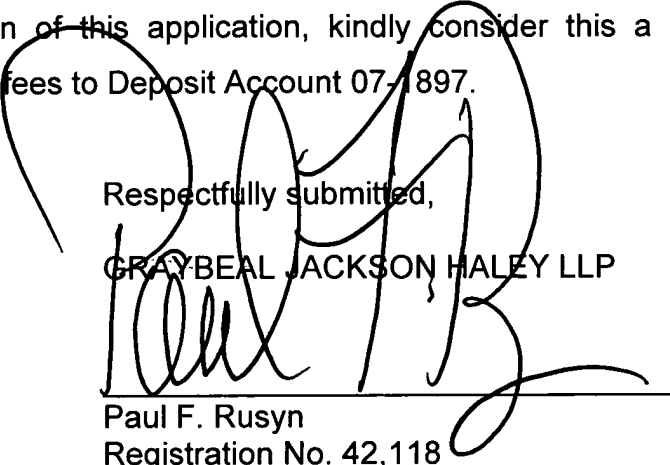
All other independent claims are allowable for reasons similar to those set forth above with regard to claims 1 and 13 and all dependent claims are allowable for the same

reasons as the associated independent claim and due to the additional limitations added by each of these dependent claims.

The present patent application is in condition for allowance. Favorable consideration and a Notice of Allowance are respectfully requested. Should the Examiner have any further questions about the application, Applicant respectfully requests the Examiner to contact the undersigned attorney at (425) 455-5575 to resolve the matter. If any need for any fee in addition to that paid with this response is found, for any reason or at any point during the prosecution of this application, kindly consider this a petition therefore and charge any necessary fees to Deposit Account 07-1897.

Respectfully submitted,

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